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(71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS, N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LETAVIC, Theodore** [US/US]; P.O. Box 3001, Briarcliff Manor, New York 10510-8001 (US). **PETRUZZELLO, John** [US/US]; P.O. Box 3001, Briarcliff Manor, New York 10510-8001 (US). **SIMPSON, Mark** [US/US]; P.O. Box 3001, Briarcliff Manor, New York 10510-8001 (US).

(74) Common Representative: **KONINKLIJKE PHILIPS ELECTRONICS, N.V.**; c/o Waxler, Aaron P.O. Box 3001, Briarcliff Manor, New York 10510-8001 (US).

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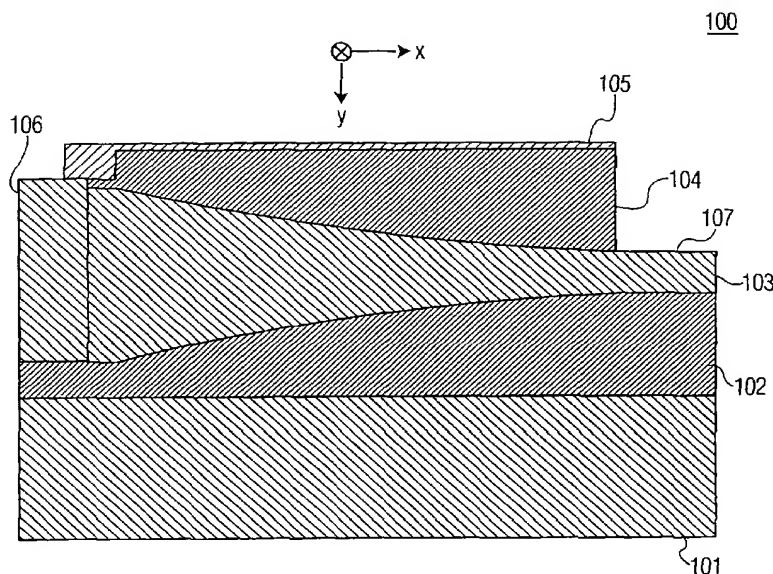
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Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE,

[Continued on next page]

(54) Title: FIELD-EFFECT DEVICE HAVING A METAL-INSULATOR-SEMICONDUCTOR HIGH-VOLTAGE STRUCTURE AND METHOD OF MAKING THE SAME



(57) Abstract: A field effect electronic device (100, 600) (e.g., an FET such as a VDMOS) includes a field plate (105, 607) disposed adjacent a dielectric layer (104, 608), which is disposed adjacent a semiconductor layer (103, 602), wherein a drift region of the device is in the semiconductor layer. A doping level varies substantially non-linearly across the drift region, and the device exhibits a substantially constant reduced surface electric field. A method of fabricating a field effect device includes providing a non-linear non-uniform doping density in a drift region of a semiconductor layer of the device wherein both the semiconductor layer and the dielectric layer have non-constant thickness. The dielectric layer may be made of a low-k dielectric material.

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